

REMARKS

By this amendment, Applicants amend claims 13 and 20. Claims 1-20 remain pending in this application.

In the Office Action¹, the Examiner rejected claim 20 under 35 U.S.C. § 101; rejected claims 1-5 and 7-20 under 35 U.S.C. § 102(b) as being anticipated by Nagai et al. ("Estimation of Source Location Based on 2-D Music and its Application to Speech Recognition in Cars"); and rejected claim 6 under 35 U.S.C. § 103(a) as being unpatentable over Nagai in view of Amiri et al. (U.S. Patent Application Publication No. 2002/0001389).

I. REJECTION OF CLAIM 20 UNDER § 101

Although Applicants respectfully traverse the rejection of claim 20 under 35 U.S.C. § 101, Applicants have amended claim 20 for further clarity to recite a "directional setting program stored in a computer-readable medium, the program causing a computer to execute the steps" that are recited in the claim. Applicants note that "a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory." MPEP § 2106(IV)(B)(1)(a). Applicants further note that "computer programs embodied in a tangible medium, such

¹ The Office Action contains a number of statements reflecting characterizations of the related art and the claims. Regardless of whether any such statement is identified herein, Applicants decline to automatically subscribe to any statement or characterization in the Office Action.

as floppy diskettes, are patentable subject matter under 35 U.S.C. § 101 and must be examined under 35 U.S.C. §§ 102 and 103.” In re Beauregard, 53 F.3d 1583 (Fed. Cir. 1995). Accordingly, for at least the foregoing reasons, Applicants request that the Examiner reconsider and withdraw the rejection of claim 20 under 35 U.S.C. § 101.

II. REJECTION OF CLAIMS 1-5 AND 7-20 UNDER § 102(b)

Applicants respectfully traverse the rejection of claims 1-5 and 7-20 under 35 U.S.C. § 102(b) as being anticipated by Nagai. To properly anticipate Applicants' claimed invention under 35 U.S.C. § 102(b), the Examiner must demonstrate the presence of each and every element of the claim in issue, either expressly described or under principles of inherency, in a single prior art reference. Furthermore, “[t]he identical invention must be shown in as complete detail as is contained in the . . . claim.” See MPEP § 2131, quoting Richardson v. Suzuki Motor Co., 868 F.2d 1126, 1236, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989). Finally, “[t]he elements must be arranged as required by the claim.” MPEP § 2131. In this application, Nagai does not teach and every element of the claims for at least the following reasons.

Independent claim 1 recites a directional setting apparatus including, among other things, “a voice direction detector which detects occurrence direction of said certain voice in said directional determination period” and “a directional controller which controls directivity of a prescribed apparatus based on the sound signals inputted from said plurality of microphones in said directional determination period.” Nagai does not teach at least these elements of claim 1.

In the Nagai system, a car driver and a passenger can control car electronics, such as a navigation system, car audio, and a hands-free mobile phone, by speech. See p. 3041 ("Introduction"). For example, the Nagai system may recognize voices of multiple persons, such as the car driver and the passenger. See p. 3041 ("Introduction"). Furthermore, Nagai appears to show in FIG. 4 that microphones are arranged at equal intervals along in the car in order to collect voice information from persons inside of the car. See p. 3043. However, Nagai is silent as to determining the directivity of a sound received by a microphone. That is, Nagai does not teach determining the direction from which a particular sound originates. Accordingly, Nagai does not teach at least "a voice direction detector which detects **occurrence direction** of said certain voice in said directional determination period," as recited in claim 1. Furthermore, Nagai does not use collected sounds to control directivity of an apparatus. Accordingly, Nagai also does not teach at least "a directional controller which **controls directivity of a prescribed apparatus based** on the sound signals inputted from said plurality of microphones in said directional determination period," as further recited in claim 1 (emphasis added).

For at least the above reasons, Nagai does not teach each and every element of claim 1 and, accordingly, does not anticipate the claim. Furthermore, claims 2-5 and 7-17 depend from claim 1 and are not anticipated by Nagai at least due to their dependence. Therefore, the Examiner should withdraw the rejection of claims 1-17 under 35 U.S.C. § 102(b).

Independent claims 18, 19, and 20, although of a different scope from claim 1 and each other, includes similar recitations as claim 1. Accordingly, claims 18, 19, and

20 are not anticipated by Nagai for at least the reasons discussed above in connection with claim 1. Therefore, the Examiner should also withdraw the rejection of claims 2-5 and 7-17 under 35 U.S.C. § 102(b).

III. REJECTION OF CLAIM 6 UNDER § 103(a)

Applicants respectfully traverse the rejection of claim 6 under 35 U.S.C. § 103(a) as being unpatentable over Nagai in view of Amiri because a *prima facie* case of obviousness has not been established. To establish a *prima facie* case of obviousness, the prior art (taken separately or in combination) must teach or suggest all of the claim elements. See MPEP § 2142, 8th Ed., Rev. 5 (August 2006). Moreover, “in formulating a rejection under 35 U.S.C. § 103(a) based upon a combination of prior art elements, it remains necessary to identify the reason why a person of ordinary skill in the art would have combined the prior art elements in the manner claimed.” USPTO Memorandum from Margaret A. Focarino, Deputy Commissioner for Patent Operations, May 3, 2007, page 2. In this application, a *prima facie* case of obviousness has not been established for at least the reason that the applied prior art fails to teach or suggest each and every element of the claim.

Claim 6 depends from independent claim 1 and, accordingly, includes all elements thereof. As discussed above, Nagai does not teach or suggest at least “a voice direction detector which detects occurrence direction of said certain voice in said directional determination period” and “a directional controller which controls directivity of a prescribed apparatus based on the sound signals inputted from said plurality of microphones in said directional determination period,” as recited in claim 1. The

Examiner contends that Amiri teaches “an apparatus for locating a talker, in which a position estimate is used by a steering device, wherein the steering device is an image tracking algorithm to track the image of the sound source.” See Office Action at page 8. Even assuming for the sake of argument that the Examiner’s characterization of Amiri is correct, which Applicants do not concede, Amiri nevertheless does not compensate for the deficiencies of Nagai. That is, Amiri also does not teach or suggest at least “a voice direction detector which detects occurrence direction of said certain voice in said directional determination period” and “a directional controller which controls directivity of a prescribed apparatus based on the sound signals inputted from said plurality of microphones in said directional determination period,” as recited in claim 1, and required by claim 6. Accordingly, the applied prior art, whether taken alone or in combination, does not teach or suggest claim 6 at least due to its dependence from claim 1. Therefore, the Examiner should also withdraw the rejection of claim 6 under 35 U.S.C. § 103(a).

CONCLUSION

In view of the foregoing, Applicants respectfully request reconsideration and reexamination of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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